

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/062895 A2

(51) International Patent Classification: Not classified

(21) International Application Number:
PCT/US2004/043146

(22) International Filing Date:
22 December 2004 (22.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/744,690 23 December 2003 (23.12.2003) US

(71) Applicant (for all designated States except US): **DIA-
MOND INNOVATIONS, INC.** [US/US]; 6325 Huntley
Road, Worthington, Ohio 43085 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **DOSSENA, Ernesto**
[IT/IT]; Via Santa Maria Bambina No12, I-20066 Melzo
(IT). **JAKOBUSS, Markus** [DE/US]; 360 Nature Trail,
Westerville, Ohio 43082 (US). **KUEHN, Andre** [DE/DE];
Alter Darmstaeder Weg 11, 64380 Rossdorf (DE).

PROSKE, Kurt [DE/DE]; Lerchenweg 8, D-63303 Dreie-
ich-Dreieichenhain (DE). **TURNER, Dennis** [US/US];
4319 Blue River Court, Gahanna, Ohio 43230 (US).
ZIMMERMAN, Michael H. [US/US]; 1463 Worthington
Park Blvd., Westerville, Ohio 43081 (US).

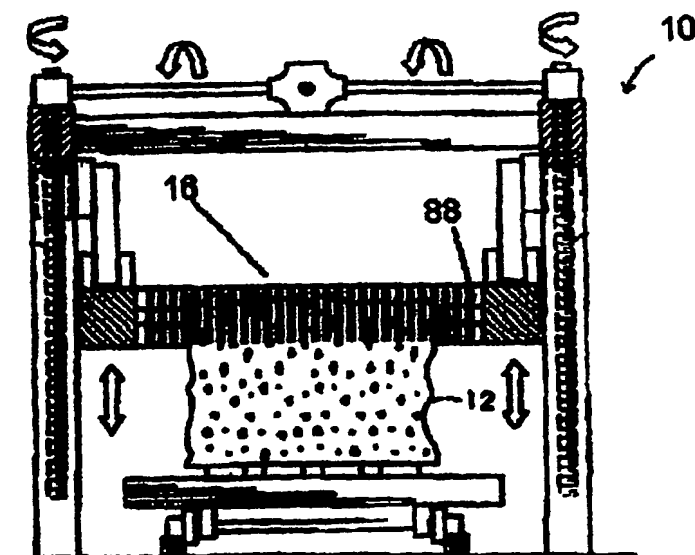
(74) Agents: **SINGER, James M.** et al.; Pepper Hamilton LLP,
50th Floor, 500 Grant Street, Pittsburgh, Pennsylvania
15219 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,

[Continued on next page]

(54) Title: **GRANITE SLABS CUT WITH FRAME SAW EMPLOYING BLADES WITH DIAMOND-CONTAINING
SEGMENTS AND METHOD OF CUTTING THEREOF**



(57) Abstract: A graphite block cut into slabs by a sawing device comprising a plurality of generally parallel, spaced-apart blades with each of the blades having a plurality of cutting segments mounted thereon, each of the cutting segments comprising a continuous phase impregnated with a superabrasive material selected from one of natural diamond, synthetic diamond, cubic boron nitride, and combinations thereof; wherein each of the granite slabs as cut from the block has a surface roughness Ra of less than 500 µ-in, and with thickness variation of 2 mm or less from a nominal slab target.



FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

- *without international search report and to be republished upon receipt of that report*